

# ABSTRACT

A test system with easy to fabricate hardware to make measurements on differential signals. The two legs of a differential signal are applied to a comparator. A variable bias is introduced into the comparison operation. By taking multiple  
5 measurements with different bias levels, the level of the differential signal may be determined. The time of measurements relative to the start of the signal can be varied to allow plots of the signal to be made. Variability of the signal caused by noise can be measured by collecting sets of data points with the same bias level at the same relative time. Circuitry for introducing bias into the comparison is disclosed that allows  
10 measurements to be made with a pre-packaged, commercially available high speed comparator.